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Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire IDEMITSU PETROCHEMICAL CO., LTD.	

## COMMUNICATION

The European Patent Office herewith transmits

- ☐ the European search report
- ☐ the declaration under Rule 45 EPC
- ☐ the partial European search report under Rule 45 EPC
- ☒ the supplementary European search report concerning the international application under Article 157(2) EPC relating to the above-mentioned European patent application. Copies of the documents cited in the search report are enclosed.

The following specifications given by the applicant have been approved by the Search Division :

- ☐ Abstract ☐ Title ☐ Figure
- ☐ The abstract was modified by the Search Division and the definitive text is attached to this communication.
- ☐ The following figure will be published with the abstract, since the Search Division considers that it better characterises the invention than the one indicated by the applicant.

Figure:

- ☒ Additional copy(copies) of the documents cited in the European search report.

## REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.



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**SUPPLEMENTARY  
EUROPEAN SEARCH REPORT**

Application Number  
**EP 01 92 5978**

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Y	EP 0 947 538 A (TEIJIN CHEMICALS LTD) 6 October 1999 (1999-10-06) * page 4, line 55 - page 5, line 9; claims 1-10 *	1-5, 11-20	C08L69/00 C08G64/04 C08J5/00 G11B7/24 C08K5/103 C08G64/40
Y	EP 0 615 996 A (GE PLASTICS JAPAN LTD) 21 September 1994 (1994-09-21) * claims 1-9 *	1-5, 11-20	
A	US 6 022 943 A (ISHIDA HIROMI ET AL) 8 February 2000 (2000-02-08)		
A	EP 0 592 900 A (DAICEL CHEM) 20 April 1994 (1994-04-20)		
Y	US 4 469 561 A (ANEJA VINEY P ET AL) 4 September 1984 (1984-09-04) * column 1, line 31 - line 39; claims 1-6 *	6-10	
Y	EP 0 511 640 A (TEIJIN CHEMICALS LTD) 4 November 1992 (1992-11-04) * claims 1-4 *	6-10	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A	US 5 959 160 A (VAN OSSELAER TONY ET AL) 28 September 1999 (1999-09-28)		G11B C08K C08G C07C
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search <b>The Hague</b>		Date of completion of the search <b>12 March 2004</b>	Examiner <b>Decocker, L</b>
<b>CATEGORY OF CITED DOCUMENTS</b>			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-5, 11-20

Polycarbonate resin for optical disk substrate having a viscosity average molecular weight of from 10,000 to 17,000, an iron content of 0,2 ppm or less, a release agent content of 100 to 500 ppm. The polycarbonate has further 1. a free total phenol content of 80 ppm or less; or 2. when an intensity of a chemical shift delta of from 7.0 to 7.5 ppm based on a phenol ring in a spectrum measured with <sup>1</sup>H-NMR is 1,000, signal intensities at delta of from 1.02 to 1.08 and from 6.69 to 6.73 are 0.01 or less; or 3. a fraction of hydroxyl end groups of less than 7% by mole.

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2. claims: 6-10

Polycarbonate resin for an optical disk substrate being produced from 2,2-(4-hydroxyphenyl)propane having a content of 2-(2-hydroxyphenyl)-2-(4-hydroxyphenyl)propane of 1,000 ppm or less, a content of a cyclic dimer of p-isopropenylphenol represented by the formula (I) (claim 6) of 150 ppm or less and a content of a trisphenol compound represented by formula (II) (claim 6) of 150 ppm or less, having a viscosity average molecular weight of from 10,000 to 17,000 and a fraction of hydroxyl end groups of less than 7% by mole, and containing from 100 to 500 ppm of a releasing agent

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 92 5978

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

12-03-2004

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 0947538	A	06-10-1999	JP	11342510 A	14-12-1999
			EP	0947538 A2	06-10-1999
			JP	2004025837 A	29-01-2004
			US	6245405 B1	12-06-2001
EP 0615996	A	21-09-1994	JP	3103652 B2	30-10-2000
			JP	5239334 A	17-09-1993
			EP	0615996 A1	21-09-1994
			US	5364926 A	15-11-1994
			US	5502153 A	26-03-1996
US 6022943	A	08-02-2000	BR	0009598 A	02-01-2002
			CN	1345348 T	17-04-2002
			EP	1171505 A1	16-01-2002
			JP	2002541284 T	03-12-2002
			WO	0059984 A1	12-10-2000
			US	6262218 B1	17-07-2001
EP 0592900	A	20-04-1994	JP	3315477 B2	19-08-2002
			JP	6179744 A	28-06-1994
			JP	6345861 A	20-12-1994
			US	5434235 A	18-07-1995
			CN	1379051 A	13-11-2002
			CN	1088946 A ,B	06-07-1994
			EP	0592900 A2	20-04-1994
			EP	0872507 A2	21-10-1998
			EP	0861863 A2	02-09-1998
			KR	175154 B1	01-04-1999
			KR	152500 B1	15-10-1998
			KR	152646 B1	15-10-1998
			US	5466775 A	14-11-1995
			US	5488094 A	30-01-1996
			US	5670604 A	23-09-1997
			JP	7070307 A	14-03-1995
US 4469561	A	04-09-1984	NL	8202565 A	01-02-1983
EP 0511640	A	04-11-1992	JP	4331257 A	19-11-1992
			EP	0511640 A2	04-11-1992
US 5959160	A	28-09-1999	DE	19611141 A1	25-09-1997
			CN	1162588 A ,B	22-10-1997
			DE	59702263 D1	05-10-2000
			EP	0796834 A2	24-09-1997
			ES	2151693 T3	01-01-2001
			JP	9255604 A	30-09-1997